apple.book Page 1 Wednesday, March 19, 2003 12:05 PM

Setting Up Your Power Mac G4

Includes setup and expansion information for
Power Mac G4 abs Macintosh Server G4 computers

apple.book Page 1 Wednesday, March 19, 2003 12:05 PM

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apple.book Page 2 Wednesday, March 19, 2003 12:05 PM

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apple.book Page 3 Wednesday, March 19, 2003 12:05 PM

Contents

1 Setting Up 5

Positioning the Computer and Display5
Plugging in the Computer6
Problems? 11
What's Next? 12

2 Using Your Computer 13

Using your Apple Pro Keyboard and Apple Pro Mouse14
Using USB Devices 16
Using FireWire Devices 18
Using Your DVD Drive 20
Using Your Modem 23
Connecting to an Ethernet Network24

3 Working Inside Your Computer 27

Opening the Computer 28
Installing Memory 30
Replacing the Battery 34

4 Troubleshooting 35

apple.book Page 4 Wednesday, March 19, 2003 12:05 PM

apple.book Page 5 Wednesday, March 19, 2003 12:05 PM

CHAPTER 1

Setting Up

Congratulations on purchasing your new Power Mac G4 system. This chapter contains instructions for setting up your computer and display.

Positioning the Computer and Display

You can pick up the computer by any of its handles. If your monitor is heavy, be sure to use correct lifting techniques when positioning it. Position the computer and display so that

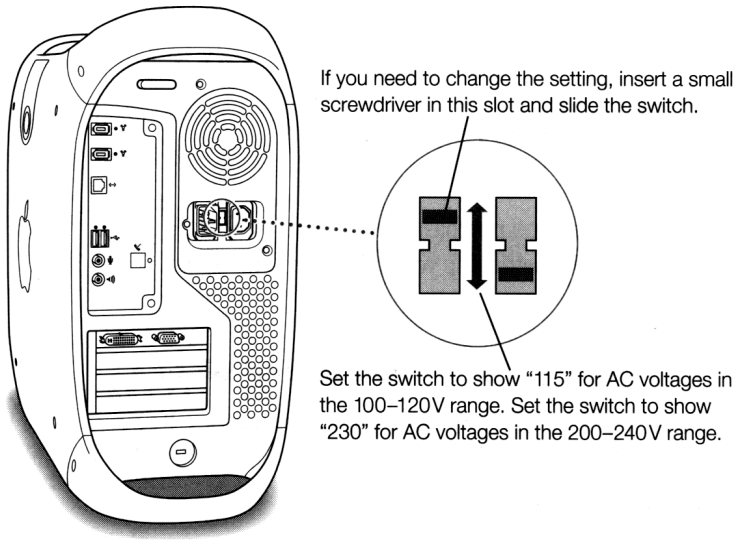
- they are on sturdy, flat surfaces
- the power cable connectors don't press against a wall or other object
- nothing obstructs air flow in the rear of the display or computer
- the computer's DVD-ROM or DVD-RAM drive tray has space to open in front

Important The only way to shut off power completely to your computer and display is to disconnect their power plugs from the power source. Make sure the power cords for your computer and display are within easy reach so that you can quickly unplug them if necessary.

Plugging In the Computer

1 Make sure the voltage switch on the back of the computer is set for the kind of voltage system to which you are connecting.

The voltage switch must be set correctly to avoid damaging your computer.

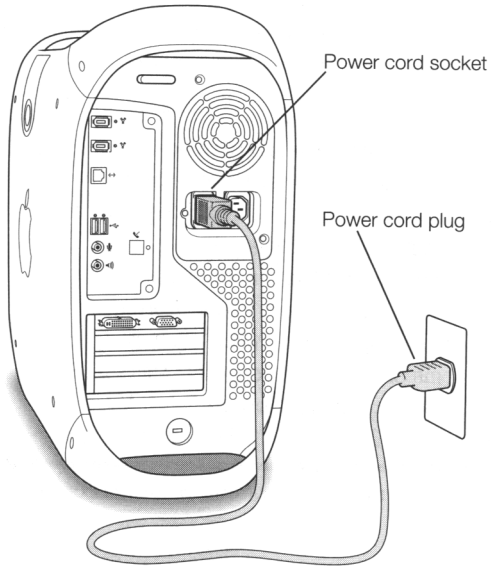

If you need to change the setting, insert a small screwdriver in this slot and slide the switch.
Set the switch to show “115” for AC voltages in the 100–120V range. Set the switch to show “230” for AC voltages in the 200–240V range.

Country	Switch setting
Bermuda, Canada, Jamaica, Japan, Mexico, Philippines, Puerto Rico, Saudi Arabia, Taiwan, United States, Venezuela	115
Bahrain, Brazil, France, Indonesia, Italy, Lebanon, Peru, South Korea, Spain	115 or 230
Argentina, Australia, Austria, Belgium, Bosnia and Herzegovina, Chile, China (People's Republic including Hong Kong), Croatia, Czech Republic, Denmark, Egypt, Finland, the Former Yugoslav Republic of Macedonia, Germany, Greece, Greenland, Hungary, Iceland, India, Iran, Ireland, Israel, Jordan, Kuwait, Liechtenstein, Luxembourg, Malta, Nepal, the Netherlands, New Zealand, Northern Ireland, Norway, Oman, Pakistan, Papua New Guinea, Paraguay, Poland, Portugal, Qatar, Romania, Russia and the Commonwealth of Independent States (CIS), Serbia and Montenegro, Singapore, Slovakia, Slovenia, South Africa, Sweden, Switzerland, United Arab Emirates, United Kingdom, Yemen	230

1 These countries employ more than one type of power source voltage. Ask your local power provider which switch setting to use for your city or region.

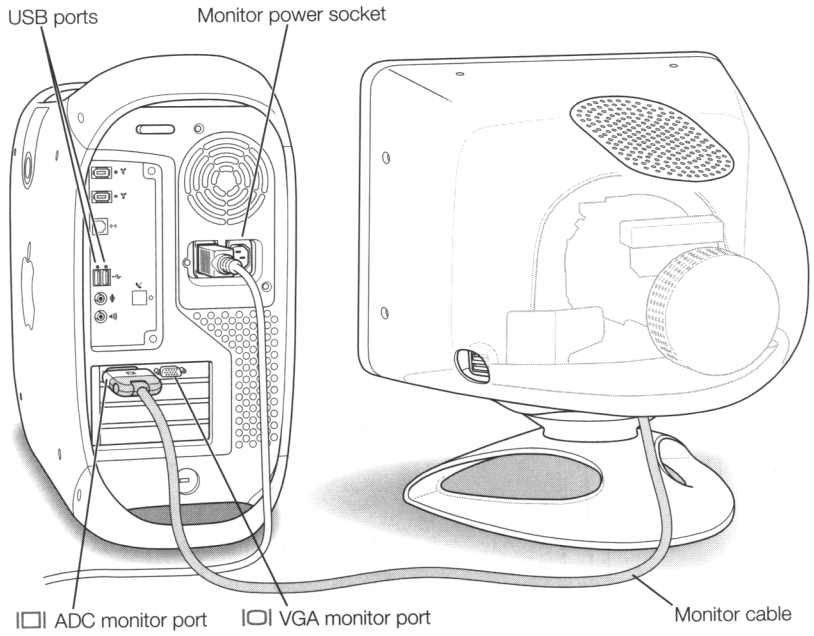
Warning Setting the voltage for your computer also sets the voltage of the power socket for the monitor on the back of the computer. Be sure your monitor can support this voltage before plugging it into the computer's power socket. Use an appropriate adapter or voltage converter if one is necessary. (Monitors that connect to the Apple Display Connector on the computer's AGP graphics card automatically draw the appropriate voltage and don't need adapters.)

2 Plug the power cord firmly and completely into the recessed power socket marked with the symbol ^ on the back of the computer and plug the other end into a grounded outlet or power strip.



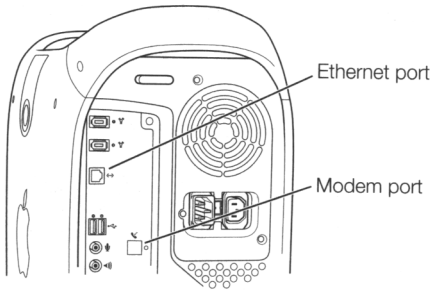
3 Connect your monitor cables according to the following illustration:

Important Depending on your monitor, you may have one or more cables to connect. Check the instructions that came with the monitor for further setup information.

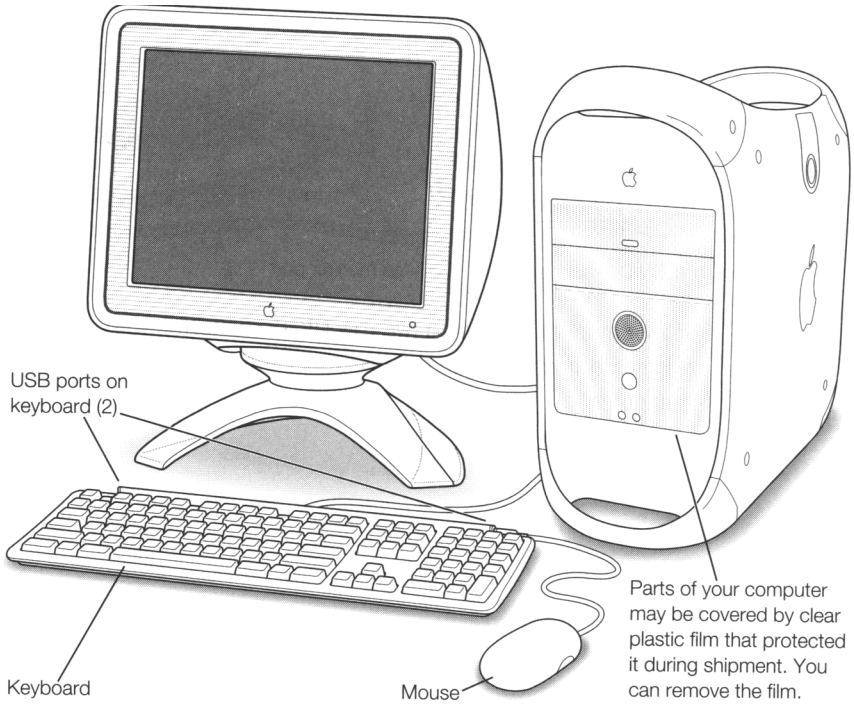


If your monitor cable has a two-row DB-15 connector, you can purchase a Macintosh-to-VGA adapter from an authorized Apple dealer and connect your monitor to the VGA port on the computer.

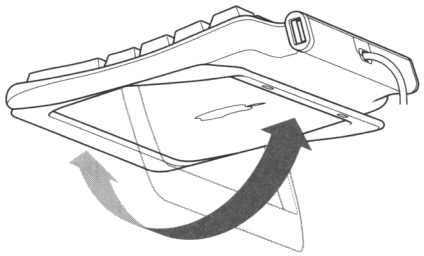
4 If required, connect your computer to your Ethernet network and connect your modem port to a phone line.



5 Connect the keyboard cable to one of the USB ports (t) on the computer or on your monitor, and plug the mouse cable into a USB port on the keyboard.


USB ports on keyboard (2)
Keyboard
Mouse
Parts of your computer may be covered by clear plastic film that protected it during shipment. You can remove the film.

If you wish, raise the keyboard by lifting it and flipping the foot toward the back.



6 Turn on your computer by pressing the monitor's power button or the power button (0) on the front of the computer.

Problems?

If you don't see anything on your screen or you think your computer did not start up properly, check these items:

- Is the computer plugged into a power source? If it is plugged into a power strip, is the power strip turned on?
- Are the keyboard and monitor cables connected correctly?
- Is the power button lit on the front panel of the computer and on the monitor? If not, the computer or monitor isn't receiving power.
- Are the brightness and contrast controls on the monitor adjusted correctly? If your monitor has brightness and contrast controls, try adjusting them.
- Try restarting your computer. Press the computer power button for approximately 5 seconds until the computer turns off. Press it again to turn the computer on.
- If you see a blinking question mark on the screen or hear a series of beeps when you turn on the computer, see Chapter 4, "Troubleshooting," on page 35.

Turning Off the Computer

To turn off your computer:

- Choose Shut Down from the Special menu.

Important Do not turn off the computer by turning off the switch on a power strip or by pulling the computer's power plug (unless you can't turn off the computer any other way). Your files or system software could be damaged if your computer is not shut down properly.

Adjusting Your Monitor

Use the Monitors control panel to adjust the settings for your monitor. For information about troubleshooting your display, see "Problems With Your Display" on page 37. Additional information about using your monitor is available in Mac Help.

To register a new Apple display with Apple, go to the Apple World Wide Web site:

www.apple.com/register

What's Next?

- For more information about using your modem, connecting to a network, or using the computer's other hardware features, see Chapter 2, "Using Your Computer," on page 13.
- For information about installing additional drives, memory, or PCI cards, or changing the computer's battery, see Chapter 3, "Working Inside Your Computer," on page 27.

apple.book Page 13 Wednesday, March 19, 2003 12:05 PM

CHAPTER 2

Using Your Computer

This chapter provides explanations and procedures for using your Power Mac G4 computer. You'll find instructions for using the important features of your computer, including your keyboard and mouse, modem, FireWire ports, USB ports, networking, and more.

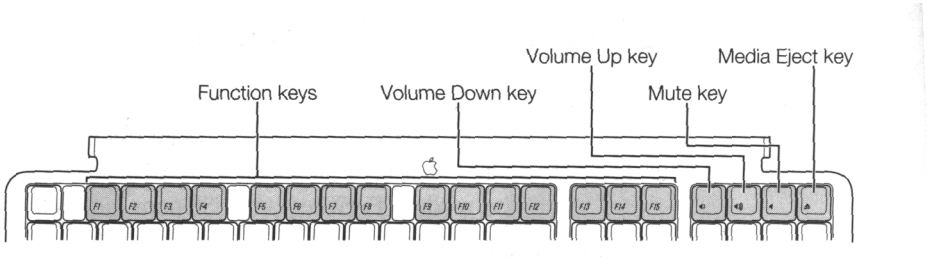
Explanations are provided for

- "Using Your Apple Pro Keyboard and Apple Pro Mouse" on page 14
- "Using USB Devices" on page 16
- "Using FireWire Devices" on page 18
- "Using Your DVD Drive" on page 20
- "Using Your Modem" on page 23
- "Connecting to an Ethernet Network" on page 24

Using Your Apple Pro Keyboard and Apple Pro Mouse

You can quickly adjust settings such as volume or eject CD or DVD discs using the keyboard controls.

Your Apple Pro Keyboard has "hot" function keys that you can set up to open your frequently used applications or documents. For example, you can use hot function keys to open your Web browser, word processor, or favorite game. Once applications are open, you can use the hot function keys to switch quickly between them.



Assigning Hot Function Keys

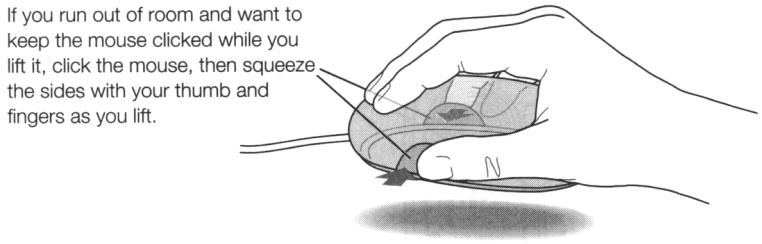
Assigning an application to a function key is simple. The first time you press one of the function keys, a dialog box appears that lets you assign any of the function keys to an application. After that, you can change function key assignments using the Keyboard control panel.

Using the Standard Function Keys

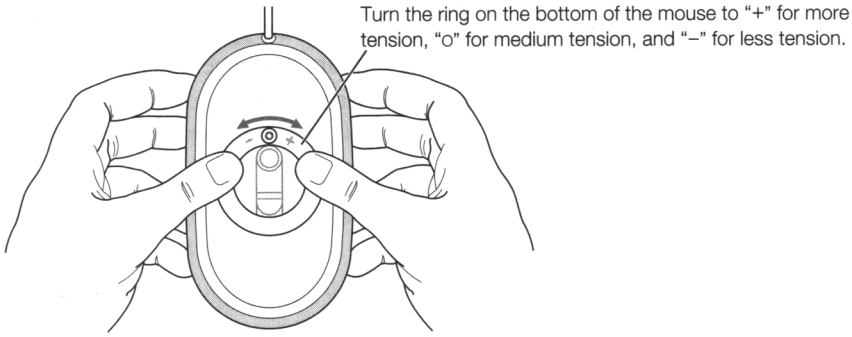
You can quickly change a key from a control or hot function key to a standard function key by pressing that key and the Fn key at the same time. You can also use the Keyboard control panel to reverse the keys so that the standard function keys are primary and the screen controls and hot function keys are secondary.

Using Your Apple Pro Mouse

To position the pointer using your mouse, move the mouse over any suitable surface such as your desktop, mouse pad, or other textured surface. (Some smooth, glassy surfaces provide less pointer control than others.) To click an object, press down once on the mouse body until you feel a click. To double-click an item, press down twice in quick succession.


If you run out of room and want to keep the mouse clicked while you lift it, click the mouse, then squeeze the sides with your thumb and fingers as you lift.

You can adjust the feel of your mouse by turning the dial underneath. Turning the dial one direction makes the feel of clicking the mouse stiffer; turning it the other way makes clicking the mouse easier.

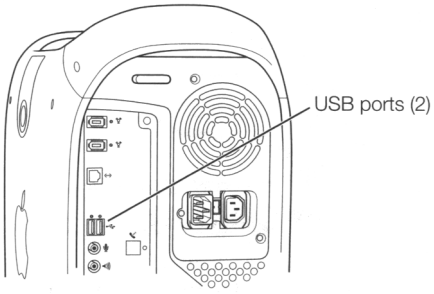


For More Information About Your Keyboard and Mouse

Additional information on configuring the keyboard controls and hot function keys is available in Mac Help. Choose Mac Help from the Help menu and search for "keyboard" or "mouse."

Using USB Devices

Your Power Mac G4 comes with two USB ports, which you can use to connect many types of external devices, including printers, digital cameras, game pads, joysticks, keyboards and mouse devices, and storage devices. USB makes it easy to connect external equipment. Once you connect the device, it is ready to use. You don't need to restart your computer.

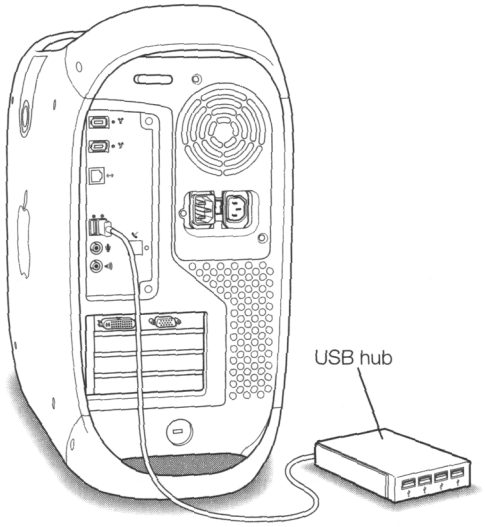


To use a USB device with your computer, connect the device to the computer and install its software or configure your computer to work with the device once. From then on, your computer automatically loads the correct software whenever you attach the device.

Note: Apple has already included software to work with many USB devices. In most cases you do not need to install the software that came with the device. If, when you connect a USB device, your Power Mac G4 cannot find the correct software, it asks you to search the Internet to find it.

Connecting Multiple USB Devices

Your Power Mac G4 has two USB ports. If you want to use more than two devices, purchase a USB hub. The USB hub connects to an open port on your computer and provides additional USB ports (usually four or seven).



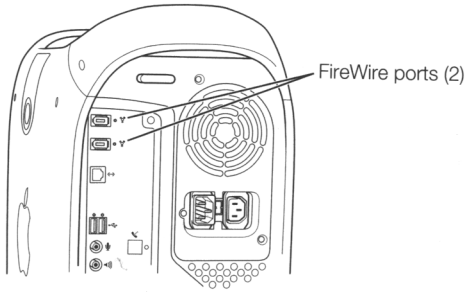
For More Information on USB

Additional information on USB is available in Mac Help. Choose Mac Help from the Help menu and search for "USB." You can also find information on Apple's USB Web site at www.apple.com/usb

For information on USB devices available for your computer, go to the Macintosh Products Guide atwww.apple.com/guide

Using FireWire Devices

Your computer has two FireWire ports. FireWire is a high-speed data transfer system that lets you easily connect and disconnect external devicesósuch as digital video (DV) cameras, printers, scanners, and hard disks. You can connect and disconnect FireWire devices without restarting your computer.



These are some of the things you can do with FireWire:

- Connect a digital video camera and capture or transfer high-quality video directly to your computer. Then you can use video-editing software such as Apple's iMovie to edit the video. Your accessory kit comes with a standard 6-pin to 4-pin FireWire cable that you can use to connect most digital video cameras.
- Connect an external FireWire hard disk drive and use it to back up data or transfer files. A FireWire hard disk icon appears on your desktop immediately after you connect the drive to your Power Mac G4. In addition, most FireWire hard disks get their power from the FireWire cable, so there is no need to carry around a power supply
- If you have a problem with your computer that prevents you from starting up or you want to transfer files, you can use FireWire to connect your Power Mac G4 to another computer so that your Power Mac G4 appears as an external hard disk on the other computer (a feature known as "FireWire target disk mode").

To use a FireWire device with your computer, connect the device to the computer and install any software that came with the device. Your computer automatically senses when you attach a new device.

To start up from a FireWire hard disk that has the Mac OS on it, use the Startup Disk control panel to select the FireWire hard disk as the startup drive. If your FireWire

hard disk doesn't appear or can't be selected in the control panel, consult the FireWire hard disk vendor for updated software drivers.

FireWire Target Disk Mode

If you have a problem with your computer that prevents you from starting up or if you just want to transfer files between two computers, you can use FireWire to connect your Power Mac G4 to another computer and then have it appear as an external hard disk on the other computer.

Important The computer you want to connect your Power Mac G4 to must have FireWire version 2.3.3 or later installed. Use Apple System Profiler, available in the Apple menu, to check the version of FireWire installed. If you have an older version, check the Apple FireWire Web site at www.apple.com/firewire

To connect your Power Mac G4 in FireWire target disk mode, follow these steps:

1. Use a standard FireWire cable with a 6-pin connector on each end to connect your Power Mac G4 to another FireWire-equipped computer.

2. Start up or restart your Power Mac G4 and immediately hold down the T key.

   Your Power Mac G4 display shows the FireWire disk mode indicator, and the Power Mac G4 internal hard disk icon appears on the desktop of the other computer.

3. When you are finished transferring files, drag the Power Mac G4 hard disk icon to the Trash to unmount the drive.

4. Press the power button on the Power Mac G4 to shut it down and then disconnect the FireWire cable.

For More Information on FireWire

Additional information on FireWire, including setting up a network of FireWire devices, is available in Mac Help. Choose Mac Help from the Help menu, and search for "FireWire." You can also find information on Apple's FireWire Web site at www.apple.com/firewire

Using Your DVD Drive

You can install or run software from CD and DVD discs using the DVD drive. You can also use your DVD drive to play DVD movies, multimedia on CD-ROM discs, and music from audio CDs.

Note: If you have older software that comes on floppy disks, contact the software manufacturer to see if the software is available on a CD-ROM disc or purchase an external USE or FireWire floppy disk drive (such as an LS120/SuperDisk) for your Power Mac G4 from your Apple dealer or the Apple Store (www.apple.com/store).

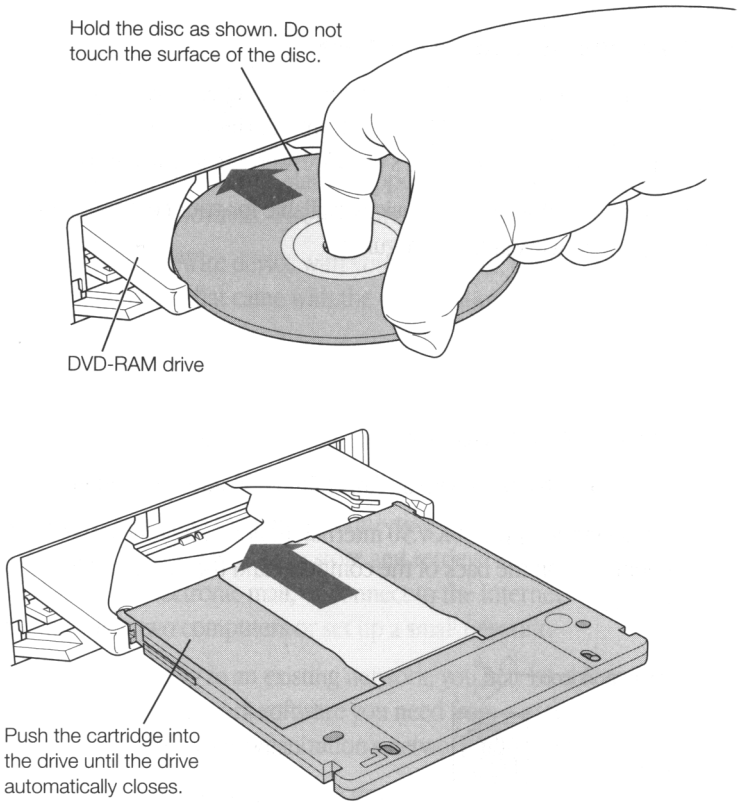
Inserting a Disc

To install or use programs from a CD or DVD-ROM disc, follow these steps:

1. With the computer turned on, press the drive button on the outside of the drive.
2. Place a disc in the tray, with the label facing up, and make sure the disc is lying flat in the tray.
3. Push the tray in to close it.
4. When the icon for the disc appears on the screen, the disc is ready for use.

Inserting a DVD-RAM Disc or Cartridge

1. Press the Open button on the drive door to open it.
2. Insert the disc or cartridge into the drive tray.


Hold the disc as shown. Do not touch the surface of the disc.
DVD-RAM drive
Push the cartridge into the drive until the drive automatically closes.

Ejecting a Disc or Cartridge

You eject a disc by dragging the disc icon to the Trash, or by pressing the Media Eject key on your keyboard. You cannot use the drive button to eject a disc from the DVD drive.

If you are unable to eject a disc, try the following:

1. Shut down the computer.
2. Carefully pull down the door covering the front of the drive tray and locate the small hole next to the Open button below the drive tray.

3 Carefully insert the end of a large straightened paper clip into the hole.

4 Push firmly until the tray opens.

5 Pull out the tray, remove the disc or DVD cartridge, and push the tray in to close it.

Playing DVD and Audio Discs

You can use the DVD drive to play DVD-Video discs on your Power Mac G4. Insert the DVD disc and then open Apple DVD Player (in the Applications folder on your hard disk).

To listen to a standard audio CD, use the AppleCD Audio Player program in the Applications folder. For help using AppleCD Audio Player, look in the Help menu when AppleCD Audio Player is open.

You can also use the AutoPlay section of the QuickTime Settings control panel or the Play portion of the Control Strip to control audio CD playback.

For More Information on Your DVD Drive

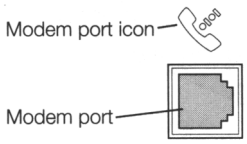
For instructions on using Apple DVD Player, open the player and then choose Apple DVD Player Help from the Help menu.

Additional information on using CD or DVD discs is available in Mac Help. Choose Mac Help from the Help menu and search for "discs."

Using Your Modem

Your Macintosh comes with an Apple 56KV.90 internal modem installed.

To connect the Apple 56KV.90 internal modem, plug one end of a phone cord into the modem port on the back of the computer and the other end into a standard RJ-11 telephone wall jack.



Important Make sure you connect the internal modem to an analog phone line of the kind used typically in homes. The modem will not work with a digital phone line.

More information about the internal modem is available in Mac Help (in the Help menu).

Warning Disconnect your modem from the phone jack during lightning or thunder storms. This will prevent a destructive voltage overload from damaging the modem.

Using an External USB Modem

To connect an external USB modem, use a USB cable to connect the modem to a free USB port on the keyboard, computer, USB monitor, or USB hub.

Check the documentation that came with the modem to see if it needs to be plugged into a power outlet. Also look for instructions about installing modem software and connecting the modem to a telephone line.

Connecting to an Ethernet Network

Your computer comes with built-in 10/100/1000 megabit per second (Mbps) twisted-pair Ethernet networking capability. Connecting to a network gives you access to other computers. You may be able to store and retrieve information, use network printers, modems, and electronic mail, or connect to the Internet. You can also use Ethernet to share files between two computers or set up a small network.

If you're connecting to an existing network, you may be able to get information about the network and the network software you need from a network administrator who oversees its operation. Identify your organization's network administrator before you begin.

Follow these guidelines when selecting a cable for your network:

Type of twisted-pair Ethernet	Use twisted-pair cable types
lOMbit	Category 3,5, or 6
100/1000 Mbit	Category 5 or 6

Connecting to a Twisted-Pair Ethernet Network

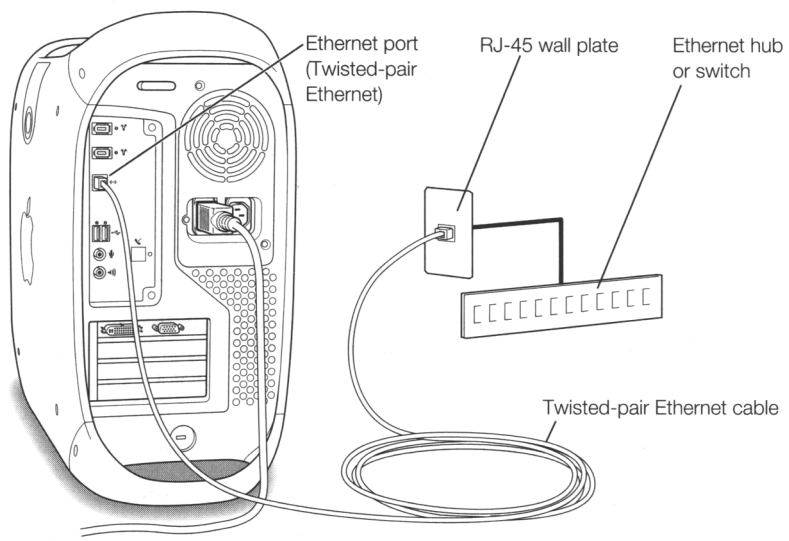
You can connect directly to a 10/100/1000 twisted-pair Ethernet network.

Note: You can also connect your computer to an Ethernet network that uses thin coaxial cables. To do this, you need an RJ-45-to-Thin Coax adapter (available from other manufacturers). See your Apple-authorized dealer for more information on Ethernet media adapters.

To connect your Macintosh to a centralized 10/100/1000 twisted-pair Ethernet network, follow these steps:

1. Plug one end of an RJ-45 twisted-pair cable into the Ethernet port on your Macintosh.

2. Plug the other end of the cord into an RJ-45 wall outlet or external hub that is connected to a twisted-pair Ethernet network.



After you start up the computer, you need to configure the software for your network connection. Your network administrator can provide the necessary information. You can also get help configuring your network software using Mac Help (in the Help menu).

For More Information on Using Ethernet

Additional information, including setting up an Ethernet network or transferring files using Ethernet, is available in Mac Help. Choose Mac Help from the Help menu and search for "Ethernet" or "network."

For information on networking products you can use with your Power Mac G4, go to the Macintosh Products Guide at www.apple.com/guide

apple.book Page 26 Wednesday, March 19, 2003 12:05 PM

apple.book Page 27 Wednesday, March 19, 2003 12:05 PM

CHAPTER 3

Working Inside Your Computer

This chapter provides information and instructions for working inside your computer. Instructions are provided for the following procedures:

- "Opening the Computer" on page 28
- "Installing Memory" on page 30
- "Replacing the Battery" on page34

Warning Apple recommends that you have an Apple-certified technician install memory, PCI expansion cards, and internal storage devices. Consult the service and support information that came with your computer for instructions on how to contact an Apple- authorized service provider or Apple for service. If you install these items yourself, you risk damaging your equipment, and such damage is not covered by the limited warranty on your computer. See an Apple-authorized dealer or service provider for additional information about this or any other warranty question.

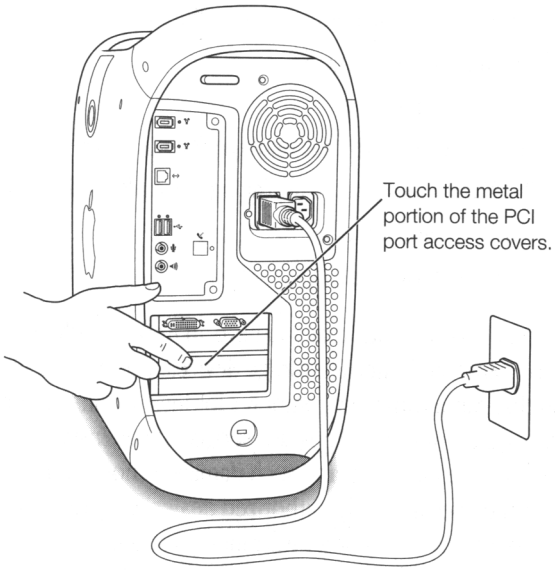
Opening the Computer

1 To shut down your computer, choose Shut Down from the Special menu. Wait five minutes to allow the computer's internal components to cool.

Warning Always shut down the computer before opening it to avoid damaging its internal components or the components you want to install. Do not open the computer or attempt to install items inside it while it is turned on.

2 Unplug all the cables from the computer except the power cord.

3 Touch the metal PCI access covers on the back of the computer to discharge any static charge.

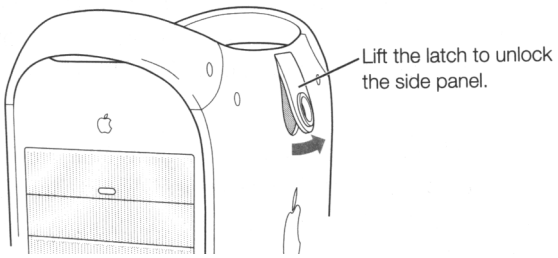


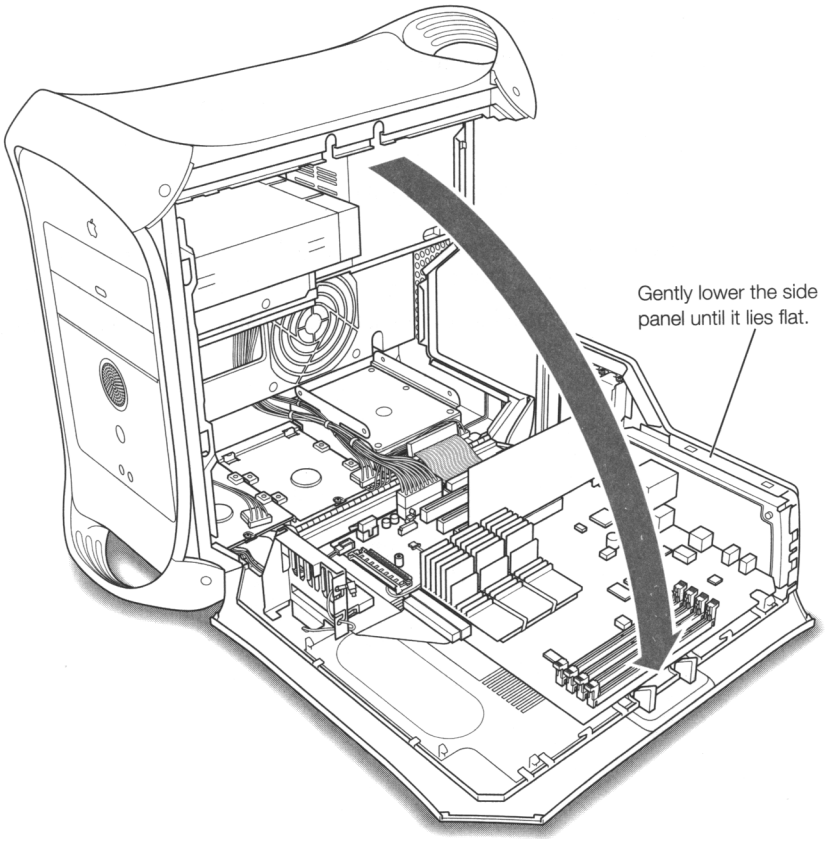
Important Always do this before you touch any parts, or install any components, inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the expansion card, memory, or internal storage device and closed the computer.

4 Unplug the power cord.

Warning The power supply is a high-voltage component and should not be opened for any reason, even when the computer is off. If the power supply needs service, contact your Apple-authorized dealer or service provider.

5 Lift the latch on the side of the computer and gently lower the side panel onto a clean, flat surface, preferably onto a soft, clean cloth.





Installing Memory

You can install additional dynamic random-access memory (DRAM) in packages called Dual Inline Memory Modules (DIMMs) in your computer's four DRAM DIMM slots on the main logic board. You can expand your computer's DRAM to a maximum of 1536 megabytes (MB). To check the amounts of DRAM and video memory installed, use the Apple System Profiler program,

If you install 512 MB DIMMs they must have 256 megabit (Mbit) devices. You can also install 256 MB DIMMs that have 256 Mbit or 128 Mbit devices. You can install different size DRAM DIMMs in any order in any DIMM slot. To check the compatibility of your DIMMs, see the Apple Macintosh Products Guide on Apple's Web site: www.apple.com/guide

DIMMs must fit these specifications:

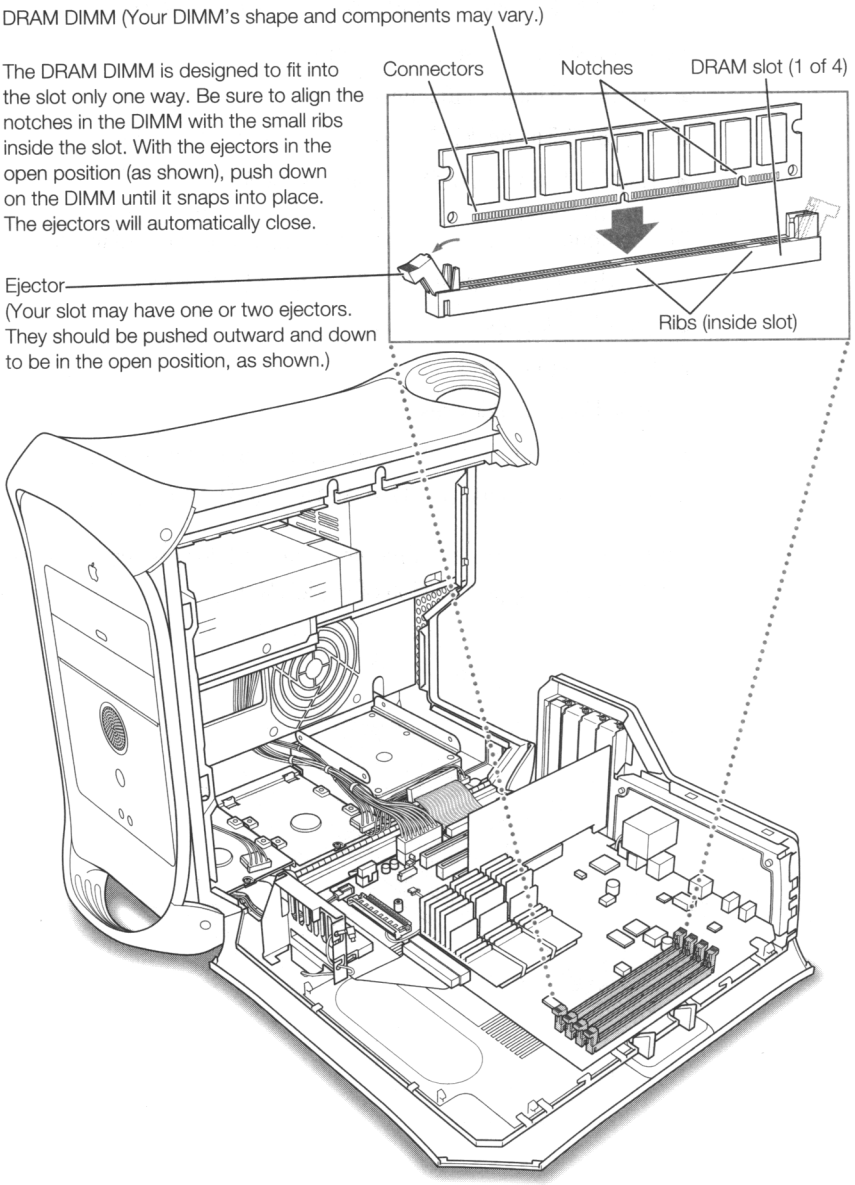
- "PC-100" Synchronous DRAM (SDRAM)
- 3.3 volt (V)
- 64-bit wide, 168-pin module
- Maximum number of memory devices on a DIMM is 16.
- Unbuffered; do not use registered or buffered SDRAM.
- Height must not exceed 2.0 inches.

Important DIMMs from older Macintosh computers are not compatible with your Power Mac G4. Only "PC-100" DIMMs from recent Power Macintosh G3 and G4 computers and servers are compatible. Do not use older DIMMs even if they fit into the DRAM DIMM slots.

1 Open the ejectors on the DRAM DIMM slots you want to use by pushing down on them.

2 Align a DRAM DIMM in the DRAM slot as pictured and push the DIMM down until the ejectors snap into place.

Important Do not touch the DIMM's connectors. Handle the DIMM only by the edges.


DRAM DIMM (Your DIMM's shape and components may vary.)
The DRAM DIMM is designed to fit into the slot only one way. Be sure to align the notches in the DIMM with the small ribs inside the slot. With the ejectors in the open position (as shown), push down on the DIMM until it snaps into place. The ejectors will automatically close.
Connectors
Notches
DRAM slot (1 of 4)
Ejector
(Your slot may have one or two ejectors. They should be pushed outward and down to be in the open position, as shown.)
Ribs (inside slot)

apple.book Page 32 Wednesday, March 19, 2003 12:05 PM

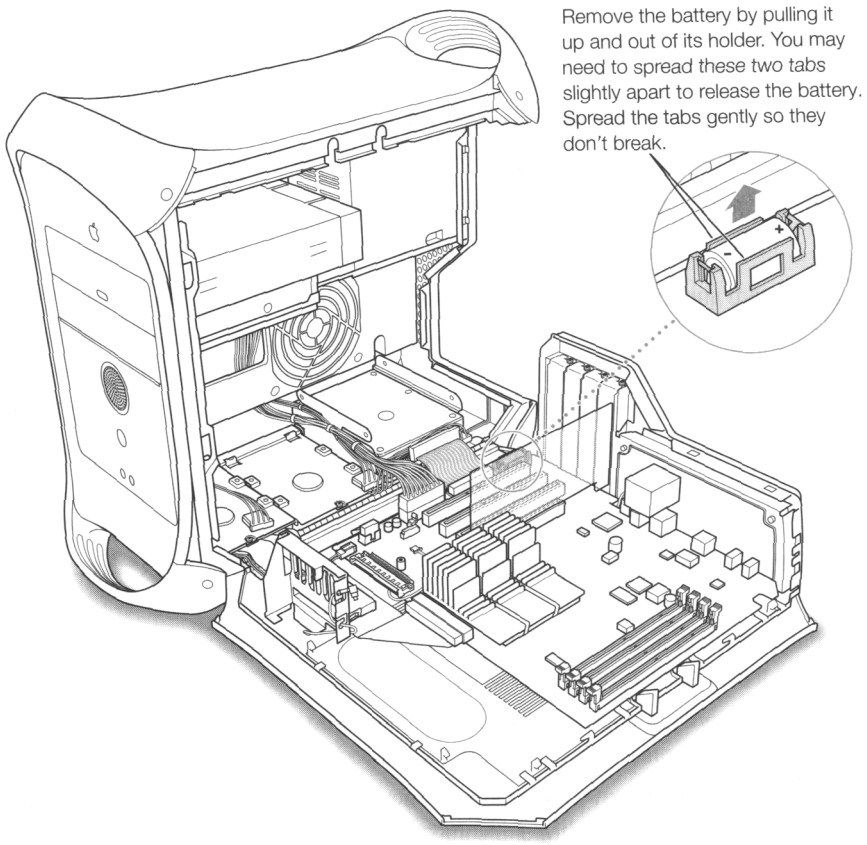
3 Close the computer.

Replacing the Battery

Your computer has a 3.6 V lithium battery installed on the main logic board. Some signs that you need to replace the battery are intermittent problems starting up the computer and random changes in its date and time settings. You can purchase a replacement battery from an Apple-authorized dealer.

1 Remove the battery from its holder, noting the orientation of the battery's positive end. (Plus and minus are also marked on and near the battery holder.)

Important Important Batteries contain chemicals, some of which may be harmful to the environment. Please dispose of used batteries according to your local environmental laws and guidelines.


Remove the battery by pulling it up and out of its holder. You may need to spread these two tabs slightly apart to release the battery. Spread the tabs gently so they don't break.
+
-

2 Insert the new battery in the holder, making sure the battery's positive and negative symbols align with those on or near the holder.

Warning Warning Installing the battery incorrectly may cause an explosion. Be sure the battery's positive and negative poles are correctly oriented in the holder. Use only the same type of battery or an equivalent recommended by the manufacturer of the original.

3 Close the computer.

apple.book Page 35 Wednesday, March 19, 2003 12:05 PM

CHAPTER 4

Troubleshooting

If you have a problem while working with your computer, here are some things you can try right away.

If the computer won't respond or the pointer won't move:

First, make sure the mouse and keyboard are connected.

- Unplug and then plug in the connectors and make sure they are firmly seated. Then try to cancel what the computer is doing.
- Press the Command (⌘) and Q keys at the same time to try quitting the current application.
- Press the Command (⌘) and period keys at the same time and, if a dialog box appears, click Cancel.
- If that doesn't work, hold down the Option and Command (⌘) keys and then press the Esc key. If a dialog box appears, click Force Quit. Restart the computer by choosing Restart from the Special menu in the Finder to be sure the problem is entirely cleared up.
- Press the reset button on the front of the computer. (The button is marked with the ◂ icon.)
- If that doesn't work, hold down the power button on the front of the computer for 5 seconds. After the computer turns off, press the button again to turn it on.
- If all else fails, unplug the power cord to turn the computer off, then replug the power cord and use the front panel power button to restart the computer.
- *If the problem occurs only when you use a particular program*, check with the program's manufacturer to see if it is compatible with your computer.
- *If the problem occurs frequently*, choose Mac Help from the Help menu. Look at the section on how to prevent and solve problems. You may need to check for extension conflicts or reinstall your computer's system software.

If the computer freezes during startup or you see a continuous flashing question mark for more than a minute:

Turn off your system extensions.

- Start up your computer while holding down the Shift key.

If that does not work, start up using the system software CD.

- Insert your system software CD and start up while holding down the C key. (Make sure the Caps Lock key is not engaged.)
- *After the computer starts up*, see the troubleshooting information in the onscreen help. Choose Mac Help from the Help menu. Look at the section on how to prevent and solve problems. You may need to check for extension conflicts or reinstall your computer's system software.

If the computer won't turn on or start up:

First, make sure the power cord is connected to a working power source.

- The plug on the power cord must be completely inserted into the computer's power socket and firmly seated for your computer to operate correctly.

Reset the computer's parameter random-access memory (PRAM).

- Start up the computer and immediately hold down the Command (⌘), Option, P, and R keys until you hear the startup sound a second time. Then select your hard disk as the computer's startup disk using the Startup Disk control panel.

If that doesn't work, or if you hear tones during startup:

- If you recently installed additional memory, a PCI expansion card, or other internal component, make sure that it is correctly installed and that it is compatible with your computer. See if removing it allows the computer to start up.
- Contact an Apple-authorized service provider.

Software Problems

If you have a problem with a software program:

- For problems with software from a manufacturer other than Apple, contact the manufacturer.

If you have a problem using your computer or working with the Mac OS:

- Look at the Help Center (in the Help menu) for instructions and troubleshooting information.

- Go to the Apple Support Web site on the Internet for the latest troubleshooting information and software updates: www.apple.com/support

If you have trouble using wireless communication:

- Make sure you have properly configured the software.
- Make sure the computer or network you are trying to connect to is running and has a wireless access point.
- Make sure you are within antenna range of the other computer or the network's access point. Nearby electronic devices or metal structures can interfere with wireless communication and reduce this distance. Repositioning or rotating the computer may improve reception.
- See AirPort Help (in the Help Center) and the instructions that came with the wireless device for more information.

Problems With Your Display

Warning If you have a problem with your Apple display and nothing presented in this manual solves it, contact an Apple-authorized service provider or Apple for assistance. If you attempt to repair the display yourself, any damage you may cause to the display will not be covered by the limited warranty on your display.

No image appears on the screen.

- Make sure the display and computer are turned on.
- Make sure the cables are connected properly to your computer and the display.
- Make sure your computer is not in sleep. Press the power button or any key to see if the computer wakes.
- Make sure the display brightness and contrast are set properly. Some monitors have brightness and contrast controls on or under their front edge.

The screen image appears dim or flickers.

- Adjust the display brightness and contrast settings. Some monitors have brightness and contrast controls on or under their front edge. Depending on how dim your monitor appears, you may be able to adjust brightness or contrast using the Monitors control panel.
- Calibrate the monitor using the Calibrate option in the Monitors control panel.
- The flickering may be caused by interference from a nearby power line, a fluorescent light, or an electrical deviceófor example, a radio, a microwave oven,

apple.book Page 38 Wednesday, March 19, 2003 12:05 PM

or another computer. Try relocating nearby electrical devices or moving your computer and display.

No colors appear on the screen or the colors don't look right.

- Make sure the display is connected firmly to the computer.
- You may want to calibrate your monitor using the Monitors control panel. For more information on color and your display, see Mac Help.
- Open the Monitors control panel and make sure your monitor is set to display colors. For more information on color and your display, see Mac Help.

After you change the screen resolution, desktop icons move.

- Changing the screen resolution affects the display of information on your screen. The operating system may automatically reposition icons after you change the screen resolution.

The screen freezes.

- If you are using both Energy Saver and a screen saver program, the screen saver program may be conflicting with Energy Saver. Turn off either the screen saver program or Energy Saver and restart your computer.

The light on the front of the monitor is flashing.

On some Apple flat panel displays, the power light can display a series of short flashes when an error has been detected.

- *If you see a repeating sequence of three short flashes*, the monitor is detecting input in the wrong video format. Check that your monitor is compatible with your graphics card and that you've installed the correct monitor software, if your monitor came with installation software.
- *If you see a sequence of two short flashes and a long flash*, the monitor is detecting a problem with a backlighting lamp. Contact an Apple-authorized dealer or service provider.

apple.book Page 1 Wednesday, March 19, 2003 12:05 PM

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apple.book Page 2 Wednesday, March 19, 2003 12:05 PM